AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-12 (Canceled)

13. (**Currently Amended**) A method for pre-detecting responses in a secondary radar, the responses to be pre-detected including a message coded by a modulated signal, the method comprising:

a step (i) of identification, during which detection is made of the presence of a modulated signal with modulation characteristics corresponding to said modulation characteristics of a message included in a response to be pre-detected,

a step (ii) of measurement during which the duration of the identified modulated signal is measured; and

a step (iii) of comparison during which the said duration of the identified modulated signal is compared to a minimum duration, which is defined as being shorter than the duration of the message ~~includes~~ included in any of the responses to be pre-detected.

14. (**Currently Amended**) The method as claimed in claim 13, wherein, the signal coding the message being ~~coded by the~~ a position modulated signal in position, the presence of said modulated signal is identified by detecting a sequence of pulses, in which said each pulse is separated from the previous pulse by at most a duration of the order of a modulation period.

15. (**Currently Amended**) The method as claimed in claim 14, wherein, when said modulated signal corresponding to the message is identified, a slot is generated <u>the</u> duration [[at]] <u>of</u> which is substantially equal to the duration between the first pulse and the last pulse of the sequence of pulses, to within about a modulation period.

16. (Previously Presented) The method as claimed in claim 15, wherein said slot is produced from the detected pulses by producing a stable signal beginning with the detection of the first pulse of the sequence and finishing with the detection of the last pulse.

17. (Previously Presented) The method as claimed in claim 16, wherein the said pulses are detected by comparing the modulated signal to a threshold determined as a function of a peak level of the modulated signal.

18. (Previously Presented) The method as claimed in claim 16, wherein said stable signal is generated beginning with a falling edge of the pulse and has duration substantially equal to the duration of a period of modulation raised by 20%.

19. (Previously Presented) The method as claimed in claim 18, wherein said pulses are detected by comparing the modulated signal to a threshold determined as a function of a peak level of the modulated signal.

20. (Previously Presented) The method as claimed in claim 15, wherein the duration of the identified modulated signal is determined by measuring the duration of the slot.

21. (Previously Presented) The method as claimed in claim 13, wherein the responses to be pre-detected being mode S responses, the minimum duration of the messages is of the order of 56 microseconds for short responses or of the order of 112 microseconds for long responses.

22. (**Currently Amended**) A method for detecting responses in a secondary radar, the responses to be detected including a preamble and a message, the preamble including protocol data, the message being coded by a modulated signal, the method comprising:

a step of pre-detecting the responses to be detected, a response being pre-detected by identifying the message that it comprises;

a step of determination during which forecast position of the preamble of each pre-detected response is determined; and

a step of checking during which the presence of the determined protocol data at said forecast position of the preamble is checked;

wherein the step of pre-detection implements [[the]] a method further comprising:

a step (i) of identification, during which detection is made of the presence of a modulated signal with modulation characteristics corresponding to said modulation characteristics of a message included in a response to be pre-detected,

a step (ii) of measurement during which the duration of the identified modulated signal is measured; and

a step (iii) of comparison during which the said duration of the identified modulated signal is compared to a minimum duration, which is defined as being shorter than the duration of the message ~~includes~~ included in any of the responses to be pre-detected.

23. (Previously Presented) The method of detection as claimed in claim 22, wherein the forecast position of the preamble is determined on the basis of the beginning or of the end of the modulated signal identified in the pre-detection step.

24. (Previously Presented) The method as claimed in claim 22, wherein the responses to be detected being mode S responses, a detection is generated when at least N pulses out of four are detected at the forecast position of the preamble, where N is a parameter whose value lies between 1 and 4, the limit value 1 being used to detect very scrambled responses, the limit value 4 being used to detect clear responses.

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25. (**Currently Amended**) A method for detecting responses in a secondary radar, the responses to be detected comprising a message coded by a modulated signal, said method comprising:

a step of pre-detecting the responses to be detected, a response being pre-detected by identifying the message that it comprises;

a step of generation during which a clock signal with a binary tempo is generated from the message included in the response;

a step of precisely determining the position of the beginning of the response on the basis of the beginning or of the end of the message;

wherein the step of pre-detection implements [[the]] a method further comprising:

a step (i) of identification, during which detection is made of the presence of a modulated signal with modulation characteristics corresponding to said modulation characteristics of a message included in a response to be pre-detected,

a step (ii) of measurement during which the duration of the identified modulated signal is measured; and

a step (iii) of comparison during which the said duration of the identified modulated signal is compared to a minimum duration, which is defined as being shorter than the duration of the message ~~includes~~ included in any of the responses to be pre-detected.